ABSTRACT

An electronic electric meter for use in a networked automatic meter reading environment. The electric meter retrofits into existing meter sockets and is available for new meter installations for both single phase and three phase electric power connections. The meter utilizes an all electronic design including a meter microcontroller, a measurement microcontroller, a communication microcontroller and spread spectrum processor, and a plurality of other communication interface modules for communicating commodity utilization and power quality data to a utility. The electric meter utilizes a modular design which allows the interface modules to be changed depending upon the desired communication network interface. The meter measures electricity usage and monitors power quality parameters for transmission to the utility over a two-way 900 MHz spread spectrum local area network (LAN) to a remotely located gateway node. The gateway node transmits this data to the utility over a commercially available fixed wide area network (WAN). The meter also provides direct communication to the utility over a commercially available network interface that plugs into the meter's backplane or bus system bypassing the local area network communication link and gateway node.

X:\CLIENTB\086485\9013\A0591219.1